

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Listing of Leon Springs Pupfish as Endangered With Critical Habitat**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Leon Springs pupfish (*Cyprinodon bovinus*), to be Endangered with Critical Habitat in Diamond Y Spring and its outflow stream Leon Creek in Pecos County, Texas. This is the only known wild population of this species. This action is being taken due to the decline of the population and alteration of its habitat. Decline in the population has resulted from the hybridization with a closely related species of pupfish (*Cyprinodon variegatus*) which was introduced into Leon Creek. This rule provides the full protection of the Endangered Species Act, as amended to the Leon Springs pupfish.

DATES: This rule becomes effective on September 15, 1980.

ADDRESSES: Questions concerning this action may be addressed to: Director, (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. Comments and materials relating to the rule are available for public inspection by appointment during normal business hours at the Service's Office of Endangered Species Suite 500, 1000 N. Glebe Road, Arlington, Virginia.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife, Washington, D.C. (703/235-2771).

SUPPLEMENTARY INFORMATION:**Background**

The Leon Springs pupfish was proposed as Endangered with Critical Habitat on August 15, 1978. Subsequently, Congress passed the Endangered Species Act Amendments of 1978, which substantially modified the procedures the Service must follow when designating Critical Habitat. In order to bring the Service in compliance with the amendments, the Critical Habitat portion of the original proposal was withdrawn March 6, 1979 (FR 44 12382-12384). Critical Habitat for the Leon Springs pupfish was repropose on May 16, 1980 (FR 45 32350-32353). A

public meeting was held in Fort Stockton, Texas, on June 13, 1980.

The Leon Springs pupfish was discovered in 1851 from Leon Springs, approximately 8 miles west of Fort Stockton, Texas. Since that time, Leon Springs has been radically modified (diverted, dammed, and poisoned) and ceased flowing in 1958 due to excessive groundwater removal. The pupfish disappeared from this locality prior to 1938 and was thought to be extinct. In 1965 the species was rediscovered by W. L. Minckley and W. E. Barber from Diamond Y Spring, located approximately 9 miles north of Fort Stockton, Texas.

The species is a small (1.5 inches in length) robust fish varying in body color from dusky gray to iridescent blue. Sexes can be readily distinguished by shape, color, and lateral markings. The Leon Springs pupfish inhabits highly saline habitat preferring quiet waters near the edges of shallow pools with a minimal growth of vegetation. Male pupfish guard small territories in shallow waters, where the females are attracted by courtship behaviors, spawning takes place, and eggs are deposited. Pupfish do much of their feeding from the bottom mud or from vegetation consuming invertebrates, detritus, diatoms, and vascular plants. The population of Leon Springs pupfish existing in Diamond Y Spring and its outflow stream seems to be in good condition with summer densities reaching more than 3 fish per square yard in shallow open habitats.

Much of the original habitat of this species was destroyed by diversion of water for irrigation, impoundment construction, and the desiccation of spring flows caused by excessive pumping of the underground aquifer. Currently, the single remaining pupfish habitat is threatened by oil pollution, diminishing spring flows, and the release of harmful exotic fishes.

Section 4(a) of the Act (16 U.S.C. 1531 et seq.) states: "General—(1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (1) The present or threatened destruction, modification or curtailment of its habitat or range;
- (2) Overutilization for commercial, sporting, scientific, or educational purposes;
- (3) Disease or predation;
- (4) The inadequacy of existing regulatory mechanisms; or
- (5) other natural or man-made factors affecting its continued existence."

This authority has been delegated to the Director.

Summary of Factors Affecting the Species

The Leon Springs pupfish was historically known only from Leon Springs, Leon Creek, and Diamond Y Spring, located west and north of Fort Stockton, Texas. The diversion of spring waters for irrigation and the excessive removal of ground water was responsible for the drying of Leon Springs and the upper portion of Leon Creek. Presently, this species is limited to Diamond Y Spring and its outflow into Leon Creek, approximately a 4 mile stretch of permanent aquatic habitat, which is threatened by several habitat and environmental disturbances.

The findings from recent studies and available literature and summarized herein under each of the five criteria of Section 4(a) of the Act. These factors, and their application to the Leon Springs pupfish, are as follows:

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The present habitat of the Leon Springs pupfish is surrounded by an active oil and gas field. A refinery is located approximately 500 yards upstream of the main spring head that supplies permanent water to the pupfish habitat. In the past oil spills have occurred in this area and have caused considerable fish mortality. Although oil companies have taken actions to minimize leakage of petroleum and waste products into Diamond Y Spring and Leon Creek, the potential for substantial oil spills still exist.

The pumping of groundwater in Pecos County, Texas, has resulted in the desiccation of several springs and has reduced the discharge from Diamond Y and associated springs supporting Leon Creek. If underground water supplies continue to be removed at excessive rates or are otherwise altered, the wild Leon Springs pupfish population and its essential natural habitat could be destroyed.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable.

3. *Disease or predation.* Not applicable.

4. *The inadequacy of existing regulatory mechanisms.* State laws concerning endangered species of Texas prohibit the taking of this pupfish, but do not provide mechanisms to encourage habitat protection. Listing the Leon Spring pupfish would require Federal agencies to review their actions prior to the commitment of resources to assure

that their proposals would either conserve listed species or are not likely to jeopardize the continued existence of listed species or both.

5. *Other natural of man-made factors affecting its continued existence.* The sheepshead minnow (*Cyprinodon variegatus*), which is closely related to the Leon Springs pupfish, was released into Leon Creek in 1974. This introduction resulted in the widespread hybridization between *Cyprinodon variegatus* and *Cyprinodon bovinus*, threatening the genetic purity of the Leon Springs pupfish. A carefully supervised fish poisoning program and intensive selective seining efforts successfully removed all exotic sheepshead minnows and hybrids from Diamond Y Spring and Leon Creek by August of 1978. Although the present Leon Springs pupfish population seems to be genetically pure, many areas of its habitat are readily accessible and still vulnerable to the release of harmful exotics.

Summary of Comments and Recommendations

Section 4(b)(1)(C) of the Act requires that a summary of all comments and recommendations received be published in the *Federal Register* prior to adding any species to the list of Endangered and Threatened Wildlife and Plants. Comments received on the original proposal and the reproposal of Critical Habitat are summarized below. A total of six comments were received, three from the State of Texas, two from conservation organizations, and one from the Rio Grande Fishes Recovery Team.

The Texas Department of Highways and Public Transportation recommended that the state-owned right-of-way plus 400 feet on each side of Texas Highway 18 be excluded so as not to jeopardize the possible future widening or reconstruction of Texas Highway 18 with Federal funds. The Texas Department of Water Resources requested a copy of the environmental assessment and expressed their reservations concerning the proposed actions and requested no action be taken until appropriate State agencies had commented on the environmental assessment. They felt that no action should be taken until they have assurances that the proposed designations do not adversely affect water use. The Texas Parks and Wildlife Department responded for Governor Brisco and agreed with the proposal for the Leon Springs pupfish. Two conservation organizations, the Lone Star Chapter of the Sierra Club and the New York Zoological Society supported

the Endangered status and Critical Habitat for the Leon Springs pupfish. The Rio Grande Fishes Recovery Team supported the listing for the Leon Springs pupfish and Critical Habitat as proposed.

Discussion and Conclusions

The concern expressed by the Texas Department of Highways and Public Transportation and the Texas Department of Water Resources addresses the Designation of Critical Habitat on their activities. The Service foresees no significantly impact on their activities. Actually, there may be many kinds of actions which can be carried out within the Critical Habitat of the Leon Springs pupfish which would not be expected to adversely affect the species. Indeed, no activity is automatically excluded. This point is poorly understood by much of the public. There is widespread and erroneous belief that a Critical Habitat designation is somewhat akin to the establishment of a wildlife refuge and automatically closes an area to most uses. A Critical Habitat designation applies only to Federal agencies, and is an official notification to these agencies that their responsibilities under section 7 of the Endangered Species Act are applicable in a certain area.

The Service wishes to emphasize that it will work in close cooperation with any agency to minimize impacts of the present rule on future developments in the Diamond Y Springs and Leon Creek area. No automatic limitations are imposed by a designation of Critical Habitat. It does, however, assist Federal agencies in insuring that their actions are not likely to jeopardize the continued existence of the species.

During the extensive public comment period and associated meeting, no Federal activities were pinpointed which would be affected by such a designation. In addition, Federal agencies which were contacted were unable to identify any adverse impacts.

After a thorough review and consideration of all the information available, the Director has determined that the Leon Springs pupfish is in danger of becoming extinct throughout all or a significant portion of its range due to one or more of the factors described in section 4(a) of the Act, as specified in the proposal of August 15, 1978 (FR 43 36117-36120). Listing as Endangered and determination of Critical Habitat will provide this species with necessary protection to ensure its survival.

Critical Habitat

The Act defines "critical habitat" as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

The Service believes that the entire known range of the species under consideration should be designated as Critical Habitat. This species occupies an extremely restricted range, and is, therefore, highly susceptible to changes in habitat. The Critical Habitat area designated is an area on which are those evolutionary, ecological, behavioral, and physiological features essential to the conservation of the species. The physical and biological features of this habitat are such as to require special management considerations and protection.

Section 4(b)(4) of the Act requires the Service to consider economic and other impacts of specifying a particular area as Critical Habitat. The Service has prepared an impact analysis and believes that economic and other impacts of this action are not significant in the foreseeable future. The Service is notifying Federal agencies that may have jurisdiction over the land and water under consideration in this action.

Section 4(f)(4) of the Act requires, to the maximum extent practicable, that any rule which determines Critical Habitat be accompanied by a brief description and evaluation of those activities which in the opinion of the Director, may adversely modify such habitat if undertaken, or may be impacted by such designation. Such activities are identified below for these species.

The petroleum production operations in the vicinity of Diamond Y Spring and Leon Creek could potentially affect the Leon Springs pupfish through an accidental oil spill or indirect modification of the underground water supply. These potential adverse impacts can be eliminated or minimized by implementing appropriate preventive measures. Oil companies involved have been receptive to recommendations concerning the protection of the Leon

Springs pupfish habitat and the Service plans to encourage continued cooperation.

The land surrounding Diamond Y Spring and Leon Creek is also used for cattle grazing. However, the saline water from the springs is unsuitable for livestock consumption and the Leon Springs pupfish habitat is rarely disturbed by cattle. If it were to occur in the future excessive groundwater pumping in the vicinity of the proposed Critical Habitat for agriculture or other purposes could be detrimental to the pupfish by reducing or eliminating spring flow.

No Federal agency has jurisdiction in the Critical Habitat area, nor should any current or proposed Federal project affect the Leon Springs pupfish population.

Federal agencies (U.S. Department of Energy and Environmental Protection Agency) regulating the petroleum industry would be required to enter into section 7 consultation if an action they license or authorize might affect the Critical Habitat. At this time the petroleum companies are not planning to construct new gas pipelines or other developments that would require Federal permits.

The proposed Critical Habitat for the Leon Springs pupfish is as follows: Diamond Y Spring and its outflow stream, Leon Creek; from the head of Diamond Y Spring downstream in Leon Creek to a point 1 mile northeast of the Texas Highway 18 crossing, approximately 10 miles north of Fort Stockton, Texas. This watercourse is located in sections 506, 507, 508, 509, 552, and 553 of the Garcia, Montez, and Duran Land Grant in Pecos County, Texas.

Effect of the Rule

Section 7(a) of the Act provides:

(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of Endangered species and Threatened species listed pursuant to section 4 of this Act. (2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized,

funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any Endangered species or Threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant Subsection (h) of this section. In fulfilling the requirements of this paragraph, each agency shall use the best scientific and commercial data available. (3) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under section 4 or result in the destruction or adverse modification of critical habitat proposed to be designated for such species.

Provisions for Interagency Cooperation are codified at 50 CFR Part 402. If published as a final rule this proposal would require Federal agencies not only to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the Leon Springs pupfish, but also insure that their actions are not likely to result in the destruction or adverse modification of their Critical Habitat. Private activity will not be affected by the rule unless it involves a taking under section 9 of the Endangered Species Act. Other activities affecting the habitat will be impacted only if there is Federal involvement in those activities. No significant modifications to projects with Federal involvement are presently foreseen.

With respect to the Leon Springs pupfish all prohibitions of section 9(a)(1) of the Act, as implemented by 50 CFR 17.21 and 17.23, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale these species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Regulations published in the Federal Register of September 28, 1975 (40 FR 44412), codified at 50 CFR 17.22 and 17.23 and provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered or Threatened species under certain circumstances. Such permits involving Endangered species are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Effect Internationally

The Service will review the status of the Leon Springs pupfish to determine whether it should be proposed to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora for placement upon the appropriate appendix to that Convention, and whether it should be considered under the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, or other appropriate international agreements.

National Environmental Policy Act

A final environmental assessment has been prepared and is on file in the Service's Washington Office of Endangered Species. This assessment is the basis for a decision that this rule is not a major Federal action that significantly affects the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969.

The primary author of this rule is Dr. James D. Williams, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975).

Note.—The Department of the Interior has determined that this is not a significant rule and does not require preparation of a regulatory analysis under Executive Order 12044 and 43 CFR Part 14.

Regulations Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

§ 17.11 [Amended]

1. Section 17.11 is amended by adding, in alphabetical order, the following to the list of animals.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fishes:							
Pupfish, Leon Springs	<i>Cyprinodon bovinus</i>	U.S.A. (Texas)...	Entire	E		17.95(e)	NA

§ 17.95 [Amended]

2. Section 17.95(e), Fishes, is amended by adding Critical Habitat of the Leon Springs pupfish after that of the Alabama cavefish as follows:

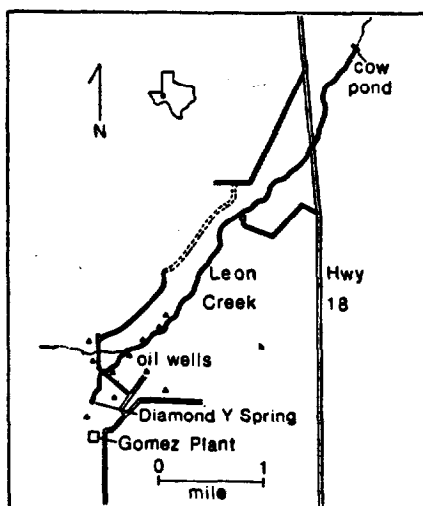
Leon Springs Pupfish

(Cyprinodon bouinus)

Texas, Pecos County. Diamond Y Spring and its outflow stream, Leon Creek; from the head of Diamond Y Spring downstream in Leon Creek to a point 1 mile northeast of the Texas Highway 18 crossing, approximately 10 miles north of Fort Stockton.

Leon Springs Pupfish

Pecos County, Tex.



Dated: August 12, 1980.

Lynn A. Greenwalt,
Director, Fish and Wildlife Service.

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